

Amended Claims

1. (Canceled)
2. (Canceled)
3. (Currently Amended) A method of producing male ~~or female~~ sterile plants according to ~~claim 1~~, comprising the steps of transforming plant material with a polynucleotide which encodes a first enzyme which is capable of N-acetylating L-phosphinothricin phosphineothricin and a second enzyme which is capable of ~~hydrolyzing, or otherwise~~ removing the acetyl group from ~~[[,]]~~ the N-acetyl L-phosphinothricin phosphineothricin to yield L-phosphinothricin phosphineothricin, and regenerating the thus transformed material into a plant, wherein the first enzyme is expressed ~~only~~ in the green tissues of the plant and additionally expressed from a female-specific floral promoter so that the enzyme is present only in green tissues and in reproductive tissues other than those reproductive tissues in which the gametes are rendered non-functional, and wherein L-phosphinothricin phosphineothricin herbicide is applied to the plant foliarly up to the time of male or female gamete formation and/or maturation, so that the plant is substantially undamaged by the application of herbicide and wherein the second enzyme is expressed preferentially in ~~either~~ male ~~or female~~ reproductive structures so that the selective local regeneration of L-phosphinothricin phosphineothricin in these tissues prevents the formation of the said gametes, or otherwise renders them non-functional.
4. (Currently Amended) A method according to claim 3, wherein the first enzyme is a phosphinothricin phosphineothricin acetyl transferase (PAT) and the second enzyme is a deacetylase ~~an amidase or hydrolase~~.
5. (Currently Amended) A method according to claim 3, wherein the L-phosphinothricin phosphineothricin is applied in mixture along with D-phosphinothricin phosphineothricin and/or at least one further compound selected from the group consisting of: safeners, gametocides, glutathione S transferase inducers, Cytochrome P-450 inducers or inhibitors, herbicides, fertilizers, nematocides, synergists, insecticides, fungicides, hormones and plant growth regulators.
6. (Previously Presented) A method according to claim 4, wherein the PAT enzyme is under expression control of a plastocyanin promoter.

7. (Canceled)